

**REMARKS/ARGUMENTS**

**Summary**

Claims 2, 4, 6,7 and 10-12 are pending in the application. Claim 12 has been amended. Claims 2, 4, 6, 7 and 10-12 are pending in the application. The amendments to the claims are supported in the specification. No new matter has been added.

**35 U.S.C. § 112**

The Examiner has rejected claims 2, 4, 6, 7 and 10-12 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended claim 12 to overcome these rejections and since claims 2, 4, 6,7, 10 and 11 depend on these claim 12 these claims have also been amended.

Applicants respectfully request the Examiner withdraw this rejection and allow claims 2, 4, 6, 7 and 10-12.

**35 U.S.C. § 102**

*A. Claims 2 and 12*

In the Office action, the Examiner rejected claims 2 and 12 under 35 U.S.C. §102(a)/(b) as being anticipated by Schmidt et al. (U.S. Patent No. 6,916,420) OR Rogemont (U.S. Patent No. 4,701,234), or Kneifel et al (U.S. Patent No. 4,303,493) OR Applicants' own admission, figures 1, 3 and 4 of the disclosure; and claim 12 is anticipated by Grummert et al. (U.S. Patent No. 6,368,505). Applicants have amended

claim 12. Applicants respectfully traverse this rejection.

Amended claim 12 recites, “wherein the plurality of longitudinal-opposed feed apertures and the plurality of longitudinal-opposed retenate apertures are bounded by the plurality of aperture seals that extend into the filtration passageways to define a plurality of filtrate channels that have a uniform flow without dead spots near the plurality of aperture seals.” Thus, the structure of claim 12 provides a plurality of longitudinal-opposed feed and the plurality of longitudinal-opposed retenate apertures that extend into the filtration passageways to define a plurality of filtrate channels that have a uniform flow to the plurality of seals where there are without dead spots. (Specification, page 10, lines 24-27).

With respect to Schmidt et al., the invention provides “an improved wide passage cross-flow filtration cassette is disclosed that incorporates an open mesh matrix retenate spacer that is dimensional and oriented so as to improve flux and cause turbulence in the flow of flow fluids through the cassette.” (Abstract). Also, the invention shows a cross-flow filtration cassette 1 that includes a multiplicity of adjacent flat filtration cells arranged in a stack. (Column 3, lines 29-33). However, Schmidt et. al. does not anticipate, suggest or disclose a plurality of longitudinal-opposed feed apertures and the plurality of longitudinal-opposed retenate apertures are bounded by the plurality of aperture seals that extend into the filtration passageways to define a plurality of filtrate channels that have a uniform flow without dead spots near the plurality of aperture seals.

For Rogemont al., this invention provides “The process of the invention concerns the manufacture of an interposed support of semipermeable microfiltration membranes,

the support composed of a permeable mesh and a sealed border of elastomeric material.” (Abstract). The structure of Rogemont includes lengthwise element 4 to form a seal around the periphery, but Rogemont et. al. does not anticipate, suggest or disclose a plurality of longitudinal-opposed feed apertures and the plurality of longitudinal-opposed retenate apertures are bounded by the plurality of aperture seals that extends into the filtration passageways to define a plurality of filtrate channels that have a uniform flow without dead spots near the plurality of aperture seals.

With respect to Kneifel, this invention provides “an improved sealing frame for the membrane stacks of electrodialysis devices, said frame, with nominal thickness providing an optimum flow distribution, so that: the entire free membrane surface can be available for the salt transportation and under such circumstances no crust formation occur; an optimum sealing effect is assured even at low pressure for pressing into engagement, with a great form stability also being assured; and a minimum pressure drop occurs in the chambers.” (Column 2, lines 7-21). Also, the structure of Kneifel includes a plurality of bores that are arranged on the oppositely located edges of a sealing frame 51. (Column 4, lines 10-17). However, Kneifel does not suggest, anticipate or disclose that a plurality of longitudinal-opposed feed apertures and the plurality of longitudinal-opposed retenate apertures are bounded by the plurality of aperture seals that extends into the filtration passageways to define a plurality of filtrate channels that have a uniform flow without dead spots near the plurality of aperture seals.

With regard to Applicants’ own admission, figures 1, 3 and 4 of the disclosure. Figures 1, 3 and 4 do not anticipate suggest or disclose a the plurality of longitudinal-

opposed feed apertures and the plurality of longitudinal-opposed retenate apertures are bounded by the plurality of aperture seals that extend into the filtration passageways to define a plurality of filtrate channels that have a uniform flow without dead spots near the plurality of aperture seals. In fact, Figures 3 and 4 show specifically that the passageway 52 and passageway 72 will develop dead spots 66 and dead spots 86. (Specification, page 4, lines 13-26). This invention is utilized to overcome the aspects of Figures 1, 3 and 4 in order to get rid of dead spots or other flow non-uniformities. Thus, the Figures 1, 3 and 4 do not suggest, anticipate or disclose providing a plurality of longitudinal-opposed feed apertures and the plurality of longitudinal-opposed retenate apertures are bounded by the plurality of aperture seals that extend into the filtration passageways to define a plurality of filtrate channels that have a uniform flow without dead spots near the plurality of aperture seals.

Grummert et al. provides an “improved cross-flow filter cassettes for the filtration of liquid media, which are used in cross-flow filtration devices of varying pump outputs that can be fitted with non-reinforced membranes. The cassettes comprise at least one retenate separator in which the inlets to the open perforations designed to form one type of channel, for example for retenate discharge, are larger than the inlets to the open perforations designed to form another type of channel, for example for fluid feed.”

(Abstract). The cross-filter cassette includes a retenate spacer 2 made up of a fabric 1 and having holes 3, 4, 5 where the holes are open and form fluid feed channels 6. (Column 3, lines 55-62). However, Grummert et al. does not suggest, anticipate or disclose providing a plurality of longitudinal-opposed feed apertures and the plurality of longitudinal-

opposed retenate apertures are bounded by the plurality of aperture seals that extend into the filtration passageways to define a plurality of filtrate channels that have a uniform flow without dead spots near the plurality of aperture seals. Thus, Schmidt, alone or in combination with Rogemont, Kneifel, Grummert et al. and Applicants' admitted Figures 1, 3 and 4 do not anticipate, suggest or disclose a plurality of longitudinal-opposed feed apertures and the plurality of longitudinal-opposed retenate apertures are bounded by the plurality of aperture seals that extend into the filtration passageways to define a plurality of filtrate channels that have a uniform flow without dead spots near the plurality of aperture seals.

Accordingly, Applicants respectfully submit that the amended claim 12 is allowable. Claim 2, which depends from independent claim 12, is allowable because independent claim 12 is allowable. Applicants respectfully request that the rejection be withdrawn and claim 2 as amended be allowed.

*B. Claim 4*

In the Office action, the Examiner rejected claim 4 under 35 U.S.C. §102(a)/(b) as being anticipated by Grummert, et al. OR Schmidt et al. OR Rogemont OR Kneifel OR Applicants' own admission, figures 1, 3 and 4 of the disclosure. Applicants have added amended claim 12. Applicants respectfully traverse this rejection.

Since the new independent claim 12 is patentable because it overcomes the Examiner's rejections to Grummert et al., Schmidt et al. in view of Rogemont et al., Kneifel and Applicants' own admission, as discussed above, this amended independent

claim 12 and dependent claim 4 overcomes the Examiner's rejections. Applicants request the Examiner to withdraw the rejection of claim 4 as amended.

### **35 U.S.C. § 103**

#### *C. Claims 6, 7, 10 and 11*

In the Office action, the Examiner rejected claims 6, 7, 10 and 11 under 35 U.S.C. §103(a) as being unpatentable over Grummert, et al. OR Schmidt et al. OR Rogemont et al. OR Kneifel OR Applicants' own admission, figures 1, 3 and 4 of the disclosure. Applicants have amended claim 12. Applicants respectfully traverse this rejection.

Since the amended claim 12 is patentable because it overcomes the Examiner's rejections to Grummert et al., Schmidt et al., Rogemont et al., Kneifel and in view of Applicants' own admission as discussed above, this amended claim 12 and dependent claims 6, 7, 10 and 11 overcome the Examiner's rejections. Applicants request the Examiner to withdraw the rejection of claims 6, 7, 10 and 11 as amended.

### **Conclusion**

Pending claims 2, 4, 6, 7 and 10-12 are patentable. Therefore, in view of the above amendments, Applicants respectfully submit that this application is in condition for allowance and such action is earnestly requested. If for any reason, however, the Examiner feels that a telephone interview would be helpful in resolving any remaining issues the Examiner is respectfully requested to contact Applicants' undersigned attorney.

Applicants respectfully assert that the claims are in allowable form and earnestly solicit the allowance of the claims 2, 4, 6, 7 and 10-12.

Respectfully submitted,

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